

REMARKS/ARGUMENTS

Applicants acknowledge receipt of the Office Action dated September 29, 2006. Claims 1-10 and 23 are pending in the application. Please note that claim 1 is an independent claim. Also, please note that claims 11 and 28 have also been amended. In the Response, the Examiner objected to the Specification and also disputed priority. In addition, the Examiner rejected claims 1-3, 6, 8, and 9 under 35 U.S.C. § 102(b) as being anticipated by Cubbage et al., Eighth Annual Orthopedic Resident Research Forum, vol. 8, 2002 ("*Cubbage*"). Moreover, the Examiner rejected claims 1-6, 9-10, and 23 under 35 U.S.C. § 103(a) as being unpatentable over *Cubbage* in view of Lei et al., U.S. Patent No. 6,777,445 ("*Lei*"). The Examiner also rejected claims 1-8 and 23 under 35 U.S.C. § 103(a) as being unpatentable over Unger et al., U.S. Patent No. 6,123,923 ("*Unger*") in view of Monforte et al., U.S. Patent No. 6,635,452 ("*Monforte*"). Applicants believe all pending claims are allowable over the art of record and respectfully request reconsideration and allowance of all claims.

I. Restriction Requirement

The Examiner restricted Applicants' claims as drawn to independent and distinct inventions. Specifically, the Examiner restricted the claims into two groups, namely Group I consisting of claims 1-10 and 23, Group II consisting of claims 11-21 and 26, and Group III consisting of claims 22, 24, and 25. In response, Applicants hereby formally elect Group I without traverse as confirmation of the provisional election made by Marcella Watkins in a telephone conversation with the Examiner on August 28, 2006. Applicants have withdrawn non-elected claims 11-22 and 24-26 and reserve the right to prosecute non-elected claims in a later divisional application.

II. Oath/Declaration

The Examiner has objected to the Oath or Declaration for omitting the mailing addresses of each inventor. By this Response, the Applicants have submitted an application data sheet containing the inventors' addresses. Applicants believe the application data sheet should address the Examiner's concerns.

III. Specification

The Examiner has objected to the Specification for informalities. Specifically, the Examiner noted the incorrect spelling of "vancomycin" in paragraph [0006] of the Specification.

In response, Applicants have amended paragraph [0006] to include the correct spelling. No new matter is added by this amendment. Accordingly, Applicants believes these amendments address the Examiner's concerns and respectfully request withdrawal of the objection.

IV. Priority

The Examiner has disputed priority of claims 1-10 and 23 to U.S. Provisional Application 60/356856, filed February 14, 2002 ("the '856 Provisional") and re-assigned priority of claims 1-9 to U.S. Provisional Application No. 60/446406, filed February 11, 2003 and claims 10 and 23 to U.S. Patent Application No. 10/776,844, filed February 11, 2004. Specifically, the Examiner states that the disclosure in the '856 Provisional fails to provide adequate support or enablement in the manner provided by 35 U.S.C. § 112, first paragraph. The Examiner further argues that the '856 Provisional only describes the binding of a "drug" to single-walled nanotubes for release of the "drug" into tissues and do not disclose the subject matter of the claims 1-10 and 23. Applicants traverse and respectfully submit that priority for claims 1-10 and 23 is properly claimed to the '856 Provisional.

According to the Manual of Patent Examining Procedure (MPEP), the standard for determining enablement under 35 U.S.C. § 112 is "whether one reasonably skilled in the art could make or use the invention from the disclosures in the patent coupled with information known in the art without undue experimentation." MPEP 2164.01, *citing United States v. Teletronics, Inc.*, 857 F.2d 778, 785, 8 USPQ2d 1217, 1223 (Fed. Cir. 1988). Furthermore, the MPEP states that support under 35 U.S.C. § 112 only requires the disclosure of the application relied upon to "reasonably [convey] to the artisan that the inventor had possession at that time of the later claimed subject matter." MPEP § 2163.03, *citing Ralston Purina Co. v. Far-Mar-Co., Inc.*, 772 F.2d 1570, 1575, 227 USPQ 177, 179 (Fed. Cir. 1985).

Applicants assert that the '856 Provisional is both enabling and contains sufficient support for the subject matter in claims 1-10 and 23. The '856 Provisional contains an extensive discussion of the functionalization of fullerenes with biological molecules including drugs or antibodies. For example, Applicants direct the Examiner's attention specifically to page 35 of the '856 Provisional, which states "the central *fullerene* acts as a structure defining spherical core." (Emphasis added). Furthermore, page 36 of the '856 Provisional explains "the number of carboxylic functions offers sites for attachment of specifically binding anchor groups like

proteins, antibodies, and other specific haptophores . . . for drug delivery.” In addition, the ‘856 Provisional provides numerous examples of covalently linking bioactive molecules such as biotin or antibodies to a fullerene molecule, not to a nanotube. See e.g. ‘856 Provisional, page 77. The ‘856 Provisional also states that “[a]nother advantage of these molecules is offered by the possibility of covalently attaching or physically adsorbing biofunctionalities like proteins, antibodies, receptors . . . to one or more of the dendron anchor groups.” ‘856 Provisional, page 48.

In view of the above, one of ordinary skill in the art would plainly understand that the Applicants were in possession of the subject matter in claims 1-10 and 23. Furthermore, Applicants submit that one of ordinary skill in the art could use or make the invention claimed in claims 1-10 and 23 without undue experimentation in view of the disclosure of the ‘856 Provisional. Thus, Applicants submit priority is properly claimed to the ‘856 Provisional and request re-assignment of priority.

V. Claims 1-3, 6, 8, and 9 are not anticipated by *Cubbage*.

The Examiner has rejected claims 1-3, 6, 8, and 9 under § 102(b) as being anticipated by *Cubbage*. In view of Section IV, Applicants respectfully submit that *Cubbage* does not antedate the priority date of claims 1-3, 6, 8, and 9. *Cubbage* has a publication date of May 30, 2002 whereas the present application claims priority to the ‘856 Provisional, filed February 14, 2002. Thus, the ‘856 Provisional was filed over 3 months before *Cubbage*. Consequently, *Cubbage* cannot anticipate claims 1-3, 6, 8, and 9 because it cannot be considered prior art under 35 U.S.C. § 102(b).

VI. Claims 1-6, 9-10, and 23 are patentable over *Cubbage* in view of *Lei*.

The Examiner has rejected claims 1-6, 9-10, and 23 under 35 U.S.C. § 103(a) as being unpatentable over *Cubbage* in view of *Lei*. Applicants traverse. As discussed above, *Cubbage* cannot be considered prior art for the purposes 35 U.S.C. § 103(a) as Applicants’ priority date antedates *Cubbage*. Because *Cubbage* is unavailable as prior art, Applicants submit that claims 1-6, 9-10, and 23 are patentable over *Cubbage* and *Lei*, and respectfully request that the Examiner withdraw the § 103 rejections of claims 1-8 and 23.

VII. Claims 1-8 and 23 are patentable over Unger in view of Monforte.

The Examiner has rejected claims 1-8 and 23 under 35 U.S.C. § 103(a) as being unpatentable over *Unger* in view of *Monforte*. Applicants traverse. Applicants submit that the Examiner has not established a *prima facie* case of obviousness because, contrary to MPEP § 2143, *Unger* in view of *Monforte* does not teach all the limitations of the claim.

Claim 1 is an independent claim upon which claims 2-8 depend. Claim 1 has been amended to recite “at least two antibiotic molecules per fullerene moiety.” Claim 23, as amended, also recites “at least two antibiotic molecules per fullerene moiety.” Nothing in *Unger* teaches or suggests at least two antibiotic molecules per fullerene moiety. To the contrary, *Unger* teaches linking photoactive agents to stabilizing materials, where the photoactive agents and stabilizing materials are encapsulated in a vesicle carrier. *Unger*, Figure 4. *Unger* teaches that fullerenes may be used as a photoactive agent. *Unger*, column 12, line 40. However, *Unger* only teaches use of antibiotics with the stabilizing material, not the photoactive agent. For example, the Examiner states that “*Unger* . . . does not explicitly disclose binding of the antibiotic to the photoactive agent.” Office Action, page 11, lines 3-4. As such, *Unger* cannot possibly teach or suggest at least two antibiotic molecules per fullerene moiety.

Unger in combination with *Monforte* also does not teach or suggest all the claim limitations. *Monforte* is directed to attaching a mass label to a reactive group for characterization of a target molecule. Nowhere does *Monforte* teach at least two antibiotic molecules per fullerene moiety. *Monforte* broadly recites that a laundry list of possible mass label compounds including fullerenes may be attached to another list of reactive groups which includes antibiotics. *Monforte*, column 13, lines 10-60. In view of such teachings, *Monforte* does not possibly suggest at least two antibiotic molecules per fullerene moiety, especially since *Monforte* does not discuss how to accomplish such a difficult chemical linkage. Thus, *Unger* in combination with *Monforte* does not teach or suggest all the claim limitations.

Applicants therefore respectfully submit that the Examiner has not shown an element in a *prima facie* case of obviousness in rejecting claim claims 1 and 23, because, contrary to MPEP § 2143, the Examiner has failed to cite references that teach or suggest all of the elements recited in the rejected claims. In addition, since independent claim 1 are submitted to be allowable, dependent claims 2-8 must *a fortiori* also be allowable, as they carry with them all the limitations

of claim 1. Accordingly, Applicants respectfully request that the Examiner withdraw the § 103 rejections of claims 1-8 and 23.

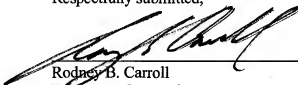
VIII. Conclusion

Applicants respectfully request reconsideration, allowance of the pending claims and a timely Notice of Allowance be issued in this case. If the Examiner feels that a telephone conference would expedite the resolution of this case, the Examiner is respectfully requested to contact the undersigned.

In the course of the foregoing discussions, Applicants may have at times referred to claim limitations in shorthand fashion, or may have focused on a particular claim element. This discussion should not be interpreted to mean that the other limitations can be ignored or dismissed. The claims must be viewed as a whole, and each limitation of the claims must be considered when determining the patentability of the claims. Moreover, it should be understood that there may be other distinctions between the claims and the prior art that have yet to be raised, but which may be raised in the future.

If any fees are inadvertently omitted or if any additional fees are required or have been overpaid, please appropriately charge or credit those fees to Conley Rose, P.C. Deposit Account Number 03-2769.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Rodney B. Carroll", is written over a horizontal line.

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